

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 October 2004 (21.10.2004)

PCT

(10) International Publication Number
WO 2004/089849 A1

(51) International Patent Classification⁷: **C04B 35/573**,
37/00, 41/50, C22C 29/06

(21) International Application Number:
PCT/EP2003/003840

(22) International Filing Date: 14 April 2003 (14.04.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **SKELETON TECHNOLOGIES AG** [CH/CH]; Zugerstrasse 72, CH-6340 Baar (CH).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ZHENG, Jie** [SE/SE]; Hagalundsgatan 14, S-169 63 Solna (SE). **ROSTVALL, Tomas** [SE/SE]; Selmedalsringen 8, S-129 36 Rågersten (SE).

(74) Agents: **ALBIHNS STOCKHOLM AB** et al.; P.O. Box 5581, S-114 85 Stockholm (SE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

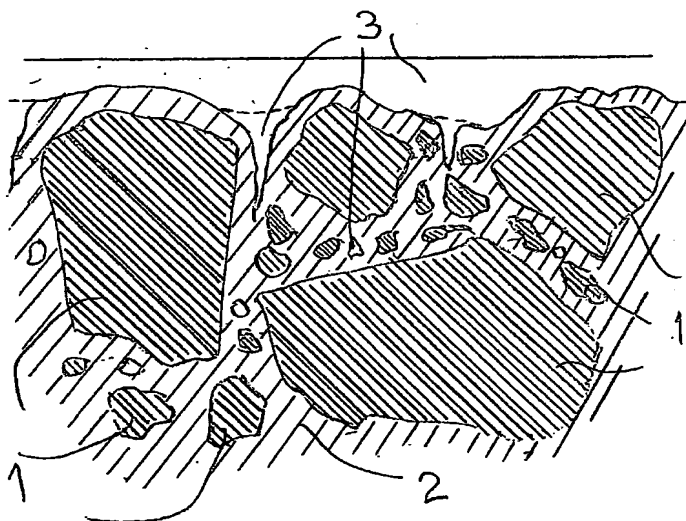
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF MANUFACTURING A DIAMOND COMPOSITE BODY HAVING A MODIFIED OUTER SURFACE



(57) Abstract: The present invention relates to a method of manufacturing a diamond composite body comprising the steps of forming a porous body containing diamond particles and graphite and/or carbon, infiltrating silicon or silicon alloy into the body and heating the infiltrated body to form carbide by reaction between graphite and/or carbon and the infiltrated silicon or silicon alloy. According to the invention the method comprises the further steps of providing a surplus of silicon or silicon alloy in connection with the infiltration step so that a layer of silicon alloy will cover at least one outer surface of the composite body, and thereafter machining the at least one outer surface covered with silicon or silicon alloy. The invention also relates to a diamond composite body produced by the method.